LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

CHICOT LAKE

LAKE HISTORY & MANAGEMENT ISSUES

CHRONOLOGY

July 2010- Prepared by
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June 2013 – update by
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Table of Contents

LAKE HISTORY

GENERAL INFORMATION

Date reservoir formed

Work on the lake site began in 1938 with partial clearing of the lake bottom, building of service roads and bridges, and construction of a one-mile levee and concrete spillway along the northeast boundary of the State Park. The lake was impounded in the late winter of 1942 by closing the dam alongside the spillway across Chicot Bayou, south of St. Landry, LA. A drawdown structure and system of drainage channels were constructed in 1963. In 1985, it was determined that the original floodgate structure needed to be replaced. In late 1985, the lake was drained to the main channel. The original spillway and floodgate was demolished. Construction of the new spillway and floodgate began in 1986. The spillway construction project was complete in December of 1987 and lake was allowed to refill.

Impoundment

Owners – Louisiana State Parks

Purposes for creation – Recreational Activities (fishing, boating, site seeing) On July 6, 1936, House Bill 338 was passed by the Louisiana Legislature which authorized and directed the State Parks Commission to purchase a site for development of a state park in Evangeline Parish: (Chicot State Park). The legislature would appropriate $25,000 for the purchase of not less than a 4,000 acre park site, including all of Chicot Lake.

Size

1,642 acres

Watershed

Watershed size is approximately 24,000 acres

Watershed ratio is 14:1

Land cover in the watershed is composed of rolling upland forest hills (pine/hardwood).

There is little or no agricultural run-off.

Pool stage

46.2’ above mean sea level (MSL)

Parish/s located

Located 7 miles north of Ville Platte, Louisiana in Evangeline parish on Hwy 3042.

(Latitude – 30^0 47’ 27’’ N Longitude – 92^0 16’ 13’’ W)

Drawdown description

There is a 200-foot spillway with 3 gates used to conduct drawdowns.

Spillway – 200 ft.

Gate size – 3-4 ft x 4 ft. openings

Number of gates - 3

Condition –Good

Flow rate – Two gates opened 24 inches each can drop the lake 4 inches per day.

Sluiceway location – N/A
Sluiceway opening - N/A
Condition – N/A
Flow rate – N/A

Who controls
Louisiana Department of Transportation and Development (DOTD)

LAKE AUTHORITY

Louisiana State Parks owns and operates Chicot State Park
Louisiana Department of Wildlife & Fisheries (LDWF) manages the fish population in Chicot Lake which lies entirely within the park
LDWF - Opelousas, LA (337) 948–0255

Authorization
Louisiana State Parks – Chicot State Park (337) 363 – 2403 or:
http://www.crt.state.la.us/parks/

Anyone fishing on OSP property must adhere to all state and federal laws and criteria regarding fresh and/or salt water fishing. The taking of fish by nets, traps or any means other than hook or line is prohibited at any and all sites, except for management purposes as authorized by special permit.: AUTHORITY NOTE: Promulgated in accordance with R.S. 56:1681-1690 and R.S. 36:204.

ACCESS

Locations of boat ramps and fishing piers are indicated on the maps located in **Appendix I**.

Boat docks
Adjacent to 3 boat ramps, all within the state park

Piers
Two four hundred foot fishing piers are available. Artificial reef structures and gravel beds have been constructed adjacent to the piers to attract sport fishes thereby potentially increasing angler success.

Figure 1. District 6 LDWF personnel design artificial reefs for deployment in Lake Chicot, LA, during 2001.

Reefs

LDWF has constructed and deployed artificial reefs along the south fishing pier (Figures 1 and 2). These structures consist of feed pallets (17x24 inches) placed over a single PVC pipe (2 inches in diameter) that is anchored, using concrete, in a 2 gallon plant pot. There are nine artificial structures that parallel the south fishing pier. In Figure 1 LDWF personnel are designing poly reefs for the south fishing pier, and in Figure 2 deploying the reefs within easy access to anglers. All reefs are visibly marked with buoys. Reefs attract bait fish, which in turn attract preferred predators such as largemouth bass, crappie and bream.

Figure 2. LDWF personnel deploy artificial reefs on lake Chicot, LA during 2001 which provide great cover for all species of fish. The purpose of the reefs is to provide cover for bait fishes and sport fishes.

Figure 3. LDWF personnel placing sand and gravel beds near a fishing pier on Lake Chicot, LA, during 2001.

In Figure 3, LDWF personnel wash sand and gravel onto the bottom of Chicot Lake next to the south fishing pier for the purpose of creating spawning habitat for sunfishes. The sand and gravel bed is approximately 4 to 6 inches in depth along both sides of the fishing pier. The bream in Chicot Lake spawn normally around the middle of April, depending on water conditions and temperature. However, spawning may continue into late summer. This will allow visitors to the Chicot State Park the opportunity to catch and harvest sunfish.

SHORELINE DEVELOPMENT

State/National Parks

Chicot State Park is approximately 6,000 acres. Chicot Lake lies entirely within the boundaries of the Chicot State Park. http://www.crt.state.la.us/parks/

Shoreline development by landowners

There is no privately owned shoreline adjacent to Chicot Lake.

PHYSICAL DESCRIPTION OF THE WATER BODY

Before impoundment, Chicot Lake was a cypress-tupelo swamp bordered by upland hardwood forest. After impoundment, cypress decreased in density in the deeper water, but increased abundance in the shallow littoral zone. Permanently flooded upland tree species

died, creating complex cover in the form of stumps and logs throughout the lake. A few bottomland hardwoods have survived in shallow water. A main channel runs through the center of the lake averaging 14 –16 feet deep. The fingers or coves off of the channel average 5 – 7 feet deep at pool stage. Numerous stumps, logs and submerged vegetation make up the majority of complex cover.

Shoreline length
32 miles of shoreline

Timber type
Cypress/tupelo

Average depth
7 feet

Maximum depth
16 feet

Natural seasonal water fluctuation
Water level fluctuation is typically about 1 –2 feet.

EVENTS / PROBLEMS

A drawdown program began on the lake in 1945 in an effort to combat the rapid spread of aquatic vegetation. The program was not successful because insufficient drainage allowed water to be trapped in the numerous wooded bays. The lake was drained in 1963 and a channel dredged to facilitate better drainage during fall drawdown periods. Restocking was conducted 1963-1964.

In 1985, it was determined that the original floodgate structure needed to be replaced. The lake was drained, and the spillway and floodgate were demolished. The spillway construction project was complete in December 1987, and the lake was allowed to refill. Restocking was initiated in 1988.

In 1988, measures intended to improve the Chicot Lake bass population were initiated, including the introduction of Florida bass (FLMB) and implementation of a 14 inch minimum length limit. In April 1989, a 16 inch minimum length limit was implemented to continue protection of a strong year class. In April 1991, a 14 – 17 inch slot was implemented to establish a quality bass fishery.

In 1993 a restriction for Chicot Lake was adopted that restricts the use of yo-yos to the period from Nov. 1 – March 1. Associated restrictions limited the number of yo-yos to 24 per boat, required each yo-yo to be tagged with:

- the name of the responsible party
- the registration number of the boat

- the date and time the yo-yo was set

The restriction also required yo-yos to be attended and re-tagged at least every 48 hours.

In December of 2011 a new yo-yo restriction was adopted. Yo-yo's can be fished from January 1 – December 31 of each year. Associated restrictions limited the number of yo-yo's to 50 per fishermen and required each yo-yo to be tagged with:

- the name of owner or user
- the address of owner or user
- the phone number of owner or user

The restriction also required yo-yo's to be rebaited at least once every 24 hours.

As of January 1, 2013 restrictions on yo-yos in Chicot Lake are:

- No more than 50 yo-yos or trigger devices, shall be allowed per person
- Each yo-yo or trigger device shall be clearly tagged with the name, address and telephone number of the owner or user.
- All fish or any other animals caught of hooked, shall be immediately removed the device.
- Each yo-yo or trigger device must be re-baited at least once every 24 hours.
- No yo-yo or trigger device shall be attached to any metallic object.

MANAGEMENT ISSUES

AQUATIC VEGETATION

Since impoundment, Chicot Lake has had an overabundance of submerged aquatic vegetation. Main species include coontail (*Ceratophyllum demersum*), fanwort (*Cabomba caroliniana),* American lotus (*Nelumbo lutea),* and invasive species including water hyacinth (*Eichhornia crassipes*) and hydrilla (*Hydrilla verticillata).* Control efforts for water hyacinth include applications of the herbicide 2,4-D (di-chlorophenoxy acetic acid). Sonar (fluridone) has been used for hydrilla control. Drawdowns are also used to control submerged vegetation.

In May of 2010, Chicot Lake was lowered two feet below pool stage to help facilitate application of the herbicide Sonar (fluridone) to control the spread of hydrilla. Sonar Q (quick release) and Sonar PR (precision release) were applied by LDWF spray crews on May 5th, 2010, to approximately 400 acres throughout the lake. Areas treated were near the South Landing, Walker Branch, Conservation Lodge, and from the spillway to the north landing. A total of 2,040 pounds of Sonar Q and 1,830 pounds of Sonar PR were applied. The largest area treated was near the spillway and totaled 235 acres. In this area, Sonar Q was applied at a rate of 89.63 ppb and Sonar PR was applied at a rate of 85 ppb. Results from this herbicide application were good, as hydrilla infestations were considerably reduced which allowed access for recreational fishermen.

Foliar herbicide applications were made in 2010 to duckweed and common salvinia in areas used by recreational fishermen. A total of 135 gallons were applied to 135 acres. Diquat dibromide (Knockout) was applied at a rate of 1 gallon per surface acre.

The Louisiana Department of Transportation and Development (DOTD) lowered Chicot Lake in 2010 to make repairs to the Walker Branch Bridge. On September 7, 2010, the gates were opened and water levels were reduced to 5 feet below pool stage. The lake level remained very low due to drought conditions in the fall and winter months. By November 2011, pool stage had not been achieved. Conditions dried the shallow areas of the lakebed and substantially reduced submerged vegetation. Spawning substrate was improved as well.

In April 2011, a low rate treatment of Sonar was applied near the spillway to address remaining hydrilla tubers. In the state of Florida, this early season approach had been found to be successful. A total of 240 pounds each of Sonar Q and Sonar PR were applied to the 235 acre section for an herbicide concentration of 5.4 ppb. In June of 2011, 120 pounds of SONAR PR and 80 pounds of SONAR Q were applied. This is considered a "bump" treatment in the same areas to keep the chemical concentrations at an effective level. This approach was a success, and hydrilla did not become a problem near the spillway during the 2011 growing season. Multiple applications of this systemic herbicide have reduced the spread of hydrilla throughout the lake.

In October 2011, foliar herbicide applications were made to water hyacinth, duckweed, pennywort, American lotus and common salvinia. A total of 95 gallons were applied to 135 acres. To control water hyacinth, pennywort and American lotus, 2,4-D was applied at a rate of 0.5 gallons per acre. Diquat dibromide was applied at a rate of 1 gallon per acre for duckweed, and glyphosate at 0.75 gallons per acre to control common salvinia.

In 2012, foliar herbicide applications were made to water hyacinth, American lotus, alligator weed, cut grass, pennywort, primrose, duckweed and common salvinia. A total of 335 gallons were applied to 742 acres of infestations. To control water hyacinth, alligator weed, primrose and American lotus, 2,4-D was applied at a rate of 0.5 gallons per acre. Diquat and glyphosate were applied at 0.75 gallons per acre to control common salvinia and duckweed. Appropriate surfactants were used in all treatments to improve herbicide efficacy.

Sonar PR and Sonar Q were applied early in the spring of 2012. Two hundred forty pounds each of Sonar PR and Sonar Q were applied in April. A follow-up application of Sonar PR (120 pounds) and Sonar Q (80 pounds) was conducted 4 weeks after the initial treatment to maintain the herbicide concentration at an effective level. The area targeted for treatment was approximately 235 acres in size and located on the north end of the lake between the north landing and the spillway.

A two foot drawdown was conducted in the fall of 2012 to help retard aquatic plant growth in Chicot Lake. The control structure was opened on September 10, 2012 to allow dewatering at a rate of 3 inches per day. The control structure was closed on September 17, 2012 when the water level reached two feet below pool stage.

Plant coverage projections for summer of 2013 include:

1. Hydrilla - up to 200 acres on the north end of the lake.

2. Other submerged vegetation (coontail, fanwort and naiad) – 450 acres.

3. Water hyacinth, pennywort & American lotus - up to 100 acres located throughout the lake.

4. Duckweed & common salvinia - up to 200 acres located on the south end of the lake.

Type map

Aquatic vegetative type mapping has been conducted since 1985. Years in which sampling occurred was 1989, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 which are included in the Chicot Lake MP-C archive. The recent type maps for 2011 and 2012 are included in **APPENDIX II.**

Biomass

Sampling for measurement of aquatic biomass was conducted in 2002 only. Table 1 lists the species and weights measured during biomass sampling.

Table 1. Species and weight of aquatic plants sampled during the 2002 aquatic biomass assessment of Chicot Lake, Louisiana.

Species	Ski Lake	Turtle Island	South Landing	Blue Springs
Fanwort	25.7	0	33.7	0
Coontail	56.2	70	0	0
Hydrilla	2056.8	63.8	27.3	7.5
Note: All values expressed in grams per cubic meter				

Treatment history by year available

Biological

None

Chemical

The use of herbicides is an important component of the LDWF integrated pest management program. The proper selection and use of herbicides is essential to achieve cost effective benefits and to avoid damage to non-target species. Each product listed has been approved by the Environmental Protection Agency for aquatic use. Aquatic vegetation will be treated according to the standard operating procedures for the application of herbicides as adopted by the LDWF Inland Fisheries Section.

Table 2 reports the herbicide applications that were used annually to control emergent vegetation including water hyacinth, alligator weed, duckweed, and American lotus. In 2003, 2005, and 2008 - 2012, LDWF treated hydrilla with Sonar (Fluridone).

Table 2. Herbicidal applications employed on Chicot Lake, Louisiana, from 1989 – 2012.

Chicot Lake Herbicide Applications				
Year	**Gallons**	**Pounds**	**Acres**	**Vegetation**
1989	750		1000	Willow trees[Rodeo (Aerial application)]
2003		2980	402	Hydrilla (Sonar Treatment north end of lake)
2005	55	2980	512	Hyacinth/Hydrilla (Sonar Treatment in north end)
2006	137		188	hyacinth/duckweed/alligatorweed
2007	279		375	hyacinth/Am. Lotus/duckweed/C. salvinia
2008	511	4980	1,494.5	Hydrilla (Sonar treatment north end of lake) hyacinth/Am. Lotus/duckweed/C. Salvinia
2009	643		827	Duckweed/common salvinia/hyacinth/alligator weed
2010	135	4,870	631.86	Duckweed & Hydrilla (SONAR treatment)
2011	95	680	1,076	Hyacinth/Alligator weed Salvinia/Primrose/Pennywort/Frog's bit/Cut Grass & Hydrilla (SONAR treatment)
2012	335	680	977	Hyacinth/Alligator weed/C. Salvinia/ Primrose/Pennywort/cutgrass/duckweed & Hydrilla (SONAR treatment)

HISTORY OF REGULATIONS

Recreational

Louisiana statewide recreational fishing regulations were in effect for Chicot Lake until 1988, when 14" minimum length limit and 10 fish daily creel limit were implemented for black bass. The regulations were designed to increase abundance of quality size bass by protecting a strong 1988 year class. Post implementation sampling was conducted to determine the effects of size restrictions for bass in Chicot Lake.

In 1990, a 16" minimum length limit with a 5 fish creel was implemented for black bass to continue to protect the strong 1988 year class.

In 1991, a protected slot limit of 14-17" with an 8 fish daily creel was implemented to protect 2–4 year old fish and allow fishermen to harvest quality largemouth bass. No more than 4 bass were allowed in the daily creel over 17" in total length. The 14-17'' slot limit is the current regulation.

Additional regulations specific to Chicot Lake were implemented in 1993, 2011 and 2012 which pertain to the use of yo-yos. Yo-yos regulations and all other statewide recreational harvest regulations may be viewed at the following link:
http://www.wlf.louisiana.gov/fishing/regulations

Commercial

Commercial fishing is legally prohibited in Chicot Lake. However, because large rough fish species can limit the production and survival of sport fish, a controlled commercial harvest of buffalo was implemented in 1967, 1968, 1970 and 1980. Rotenone samples taken by LDWF in 1968 and 1980 averaged 94 and 250 pounds/acre of buffalo fish respectively.
Total pounds harvested in 1968 – 67,897 lbs.
Total pounds harvested in 1980 – 31,404 lbs.
No harvest record is available for 1967 and 1970.

During the drawdown period of 1985-1987, the existing fish population was eradicated with rotenone, an FDA approved fish toxicant. Re-establishment of commercial species including buffalo and common carp has not been documented to date.

Louisiana commercial fishing regulations may be viewed at the following link:
http://www.wlf.louisiana.gov/fishing/regulations

DRAWDOWN HISTORY

Chicot Lake became infested with submerged aquatic plants almost immediately after impoundment. A drawdown was conducted in 1945 in an effort to combat the problem. This first drawdown was ineffective because water was unable to drain properly. In 1963, a channel was constructed to better facilitate drainage. Since that time, Chicot Lake has been lowered regularly for control of aquatic vegetation.

Drawdown date

There have been a total of 22 Chicot Lake drawdowns for control of submerged aquatic vegetation (Table 3). Drawdowns were all conducted from September – December (Fall/Winter). Partial drawdowns (2 feet below pool stage) were conducted in May/June of 2003, 2005, 2008, 2010, 2011 and 2012 to help facilitate application of the herbicide, Sonar for hydrilla control.

As indicated in Table 3, drawdowns have been an important tool in managing aquatic vegetation in Chicot Lake. From 1962 - 1992, native submerged vegetation was the primary target for control. In 1996, hydrilla was discovered. From 1996 – 2012 drawdowns and herbicide applications have been used in combination to control the spread of the invasive species, hydrilla.

Table 3. Drawdown's conducted on Chicot Lake, Louisiana by year from 1962 – 2012.

YEAR	PURPOSE	FISHING CLOSURE	DEPTH (ft)	% EXPOSED	FISH KILL
1962	Control of native submerged vegetation	No	4-5	35	No
1965	Control of native submerged vegetation	No	4-5	35	No

1966	Control of native submerged vegetation	No	4-5	35	No
1967	Control of native submerged vegetation	No	4-5	35	No
1968	Control of native submerged vegetation	No	4-5	35	No
1969	Control of native submerged vegetation	No	4-5	35	No
1970	Control of native submerged vegetation	No	4-5	35	No
1972	Control of native submerged vegetation	No	4-5	35	No
1974	Control of native submerged vegetation	No	4-5	35	No
1977	Control of native submerged vegetation	No	4-5	35	No
1979	Control of native submerged vegetation	No	4-5	35	No
1984	Spillway reconstruction	No	10-12	90	No
1992	Control of native submerged vegetation	Yes	7	60	No
1996	Hydrilla control	Yes	7	60	Yes
1997	Hydrilla control	Yes	7	60	Yes
2001	Hydrilla control	No	3-5	40	No
2003 *	Hydrilla control	No	2	15	No
2005 *	Hydrilla control	No	2	15	No
2008 *	Hydrilla control	No	2	15	No
2010*	Hydrilla control	No	2	15	No
2011*	Hydrilla control	No	2	15	No
2012*	Hydrilla control	No	2	15	No

*Partial drawdowns for hydrilla control

Who operated structure

Louisiana Department of Transportation & Development

FISH KILLS / DISEASE HISTORY

Fish kills occurred during the 1996 and 1997 drawdowns, but were limited to the north end of lake. The drawdowns began the 1st of August and extended through the end of November. These fish kills occurred when water levels receded below 7 feet. The lake bottom was completely exposed with the exception of the main channel. High water temperature and subsequent low dissolved oxygen level were determined to be the cause of the die-off.

In 2003, a sample of 30 largemouth bass were tested for Largemouth Bass Virus (LMBV) no fish were indicated to be positive for the virus.

CONTAMINANTS / POLLUTION

Water quality

Water quality parameters measured at the surface and near the bottom during each standardized fisheries sample include temperature, dissolved oxygen, pH, and conductivity.

The following Fish Consumption Advisory (Figure 4) was issued for Chicot Lake, Louisiana May 23, 2003. This advisory is still in effect.

M.J. "Mike" Foster, Jr.
GOVERNOR

David W. Hood
Secretary
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Health & Hospitals
P. O. Box 629
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70821-0629

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Secretary
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Wildlife & Fisheries
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Baton Rouge, LA
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The following fish consumption advisory was issued on 05/29/03 by the Department of Health & Hospitals, the Department of Environmental Quality, and the Department of Wildlife & Fisheries. For more information, please contact:

DHH	DEQ	DWF
Shannon Soileau	**Chris Roberie**	**Glenn Thomas**
(504) 568-8537	**(225) 765-0634**	**(225) 765-2343**

FISH CONSUMPTION ADVISORY FOR CHICOT LAKE

In response to recent sampling and analysis of fish-mercury data, the Louisiana Department of Health & Hospitals (DHH), Department of Environmental Quality (DEQ), and Department of Wildlife & Fisheries (DWF) are issuing the following advisory for Chicot Lake in Evangeline parish where unacceptable levels of mercury have been detected in largemouth bass and bowfin (choupique, grinnel). The advisory area includes Chicot Lake only. **This advisory supersedes a previous advisory issued for this water body by the state in May of 1997.**

DHH, DEQ, and DWF advise that the following precautions be taken when eating fish taken from Chicot Lake:

- **Women of childbearing age and children less than seven years of age SHOULD NOT CONSUME BOWFIN and should consume no more than ONE MEAL PER MONTH of largemouth bass from the advisory area (a meal is considered to be half a pound of fish for adults and children).**
- **Other adults and children seven years of age and older should consume no more than TWO MEALS PER MONTH of bowfin and no more than FOUR MEALS PER MONTH of largemouth bass from the advisory area (a meal is considered to be half a pound of fish for adults and children).**

Figure 4. Fish consumption advisory notice issued for Chicot Lake, May 29, 2003 by DHH, DEQ, and DWF for bowfin, *Amia calva*.

BIOLOGICAL

Fish sampling history

From the 1960's through the early 1980's, biomass sampling (rotenone) was the standard fish population assessment sampling methodology. From the mid- 1980's to present, other techniques including electrofishing, creel surveys, gillnets, biomass (rotenone), haul seine, and water quality sampling have provided the necessary fisheries data related to the management of Chicot Lake.

Note: All standardized sampling data collected by Inland Fisheries from 1965 through present are computerized. Data collected prior to 1965 is in the form of paper documents or reports on file in the LDWF District 6 Office in Opelousas.

Gear

Biomass (rotenone) samples: Consist of 3 – 4 one acre block-off net samples between the months of May through September. The standard rotenone application rate is three pints of 5% active emulsified rotenone/acre-foot.

Biomass sampling was the most common fish sampling tool on Chicot Lake until 1988. Since that time, other sampling techniques, including electrofishing, creel surveys, and seine sampling have been utilized. Biomass sampling is still used as an important management tool but is used less frequently.

Electrofishing utilizes a Smith-Root pulsator and generator which discharge a controlled electrical current into the water from a specially outfitted boat. This equipment temporarily stuns and surfaces the scaled fishes such as largemouth bass and crappie. Fish are dipped from the water, are measured and weighed and are generally returned to the water alive and unharmed.

Table 4. Historical, present and proposed fisheries sampling conducted on Chicot Lake, Louisiana from 1955 – 2016.

Chicot Lake Sampling	
Year	**Sampling Method**
1955, 1958, 1967, 1968, 1969, 1970, 1971, 1975, 1976, 1977, 1978, 1980, 1981, 1982	Biomass
1988	Electrofish, creel survey
1989	Electrofish, seine, Biomass, creel survey
1990	Electrofish, seine, gill nets, Biomass, creel survey
1991	Electrofish, gill nets, Biomass, creel survey, LMB genetics, aquatic type maps
1992	Electrofish,, gill nets, creel survey
1993	Electrofish, seine, frame nets, gill nets
1994	Electrofish, seine, gill nets, Biomass, LMB genetics, aquatic type maps
1995	Electrofish, seine, LMB genetics
1996	Electrofish, seine, gill nets, Biomass, creel survey, drawdown
1997	Electrofish, seine, gill nets, drawdown, LMB genetics
1998	Creel survey
2000	Electrofish, seine, frame nets, hoop nets
2001	Electrofish, seine, gill nets, LMB genetics
2002	Electrofish, seine, gill nets, frame nets, creel survey, aquatic type maps
2003	Electrofish, seine, gill nets, drawdown
2004	Electrofish, seine, gill net, LMB genetics
2005	Electrofishing, gill nets, seine, lead nets, aquatic type maps, drawdown
2006	Electrofishing, seine, creel survey, aquatic type maps
2007	Electrofishing, gill nets, LMB genetics and age & growth
2008	Electrofishing, rotenone, lead nets, aquatic type maps, drawdown, LMB genetics
2009	Electrofishing, gill nets, seine, aquatic type maps
2010	Electrofishing, LMB genetic and age & growth, aquatic type maps, creel survey
2011	Electrofishing, LMB genetic and age & growth, aquatic type map, seine samples
2012	Electrofishing, LMB genetic and age & growth, aquatic type map, gill nets
2013	Electrofishing, seine, lead nets, aquatic type map, drawdown
2014	Electrofishing, seine, lead nets, aquatic type map, drawdown, gill nets
2015	Electrofishing, seine, lead nets, aquatic type map, drawdown
2016	Electrofishing, seine, lead nets, aquatic type map, drawdown, gill nets

Lake records

From informal records maintained by LDWF fisheries biologists, the largest bass caught in Chicot Lake was one that weighed 13.63 pounds in 1994.

Stocking

Table **5**. Fish stocking history by year and by species for Chicot Lake from 1988 – 2013.

YEAR	FLORIDA BASS	CHANNEL CATFISH	BLUE CATFISH	THREADFIN SHAD	BLUEGILL
1988	342,668		10,000		
1989	150,000				
1990	127,564			1,500	
1991	132,619			2,500	
1992	107,221			5,000	
1993	80,595				
1994	85,250				
1995	153,475	28,185			
1996	18,792				
1997	19,178	115,000			
1998	55,800	22,000			
1999	152,872	6,303	6,365		2,120
2000	87,891				
2001	89,568				
2002	73,322				
2003	83,989				
2004	80,748				
2005	84,310				
2006	82,425				
2007	84,192				
2008	79,596				
2009	86,241				
2010	15,000				
2011	72,331				
2012	66,940				
2013	17,232				
Totals	**2,412,587**	**171,488**	**16,365**	**9,000**	**2,120**

The majority of all largemouth bass stocked into Chicot Lake were fingerlings approximately 1- 2 inches in total length. All largemouth bass were released by boat throughout the lake in various types of habitat, such as thick vegetation and complex woody cover. Other species stocked included channel and blue catfish, threadfin shad and bluegill.

Species profile

Table 6. Fish species collected by LDWF or are known to occur in the Bayou Chicot Watershed.

LIST OF INDIGENOUS FRESHWATER FISHES KNOWN FROM THE CHICOT BAYOU WATERSHED LOUISIANA

Lamprey Family, PETROMYZONTIDAE

Southern brook lamprey, *Ichthyomyzon gagei* Hubbs and Trautman

Gar Family, LEPISOSTEIDAE

Spotted gar, *Lepisosteus oculatus* (Winchell)
Shortnose gar, *Lepisosteus platostomus* Rafinesque

Bowfin Family, AMIIDAE

Bowfin, *Amia calva* Linnaeus

Freshwater Eel Family, ANGUILLIDAE

American eel, *Anguilla rostrata* (Lesueur)

Herring Family, CLUPEIDAE

Gizzard shad, *Dorosoma cepedianum* (Lesueur)
Threadfin shad, *Dorosoma petenense* (Günther)

Minnow Family, CYPRINIDAE

Blacktail shiner, *Cyprinella venusta* (Girard)
Red shiner, *Cyprinella lutrensis* (Baird and Girard)
Common Carp, *Cyprinus carpio* Linnaeus
Cypress minnow, *Hybognathus hayi* Jordan
Mississippi silvery minnow, *Hybognathus nuchalis* Agassiz
Striped shiner, *Luxilus chrysocephalus* Rafinesque
Redfin shiner, *Lythrurus umbratilis* (Girard)
Shoal chub, *Macrhybopsis aestivalis* (Girard)
Golden shiner, *Notemigonus crysoleucas* (Mitchill)
Bigeye chub, *Notropis amblops* (Rafinesque)

Emerald shiner, *Notropis atherinoides* Rafinesque
Blackspot shiner, *Notropis atrocaudalis* Evermann
Iron-colored shiner, *Notropis chalybaeus* (Cope)
Bluehead shiner, *Notropis hubbsi* Bailey and Robison
Silverband shiner, *Notropis shumardi* (Girard)
Weed shiner, *Notropis texanus* (Girard)
Mimic shiner, *Notropis volucellus* (Cope)
Bluenose shiner, *Notropis welaka* Evermann and Kendall
Pugnose minnow, *Notropis emiliae* Hay
Bullhead minnow, *Pimephales vigilax* (Baird and Girard)

Sucker Family, CATOSTOMIDAE

Lake chubsucker, *Erimyzon sucetta* (Lacépède)
Bigmouth buffalo, *Ictiobus cyprinellus* (Valenciennes)

Freshwater Catfish Family, ICTALURIDAE

Black bullhead, *Ameiurus melas* (Rafinesque)
Yellow bullhead, *Ameiurus natalis* (Lesueur)
Blue catfish, *Ictalurus furcatus* (Lesueur)
Channel catfish, *Ictalurus punctatus* (Rafinesque)
Black madtom, *Noturus funebris* (Gilbert and Swain)
Tadpole madtom, *Noturus gyrinus* (Mitchill)
Flathead catfish, *Pylodictis olivaris* (Rafinesque)

Pike Family, ESOCIDAE

Chain pickerel, *Esox niger* Lesueur

Pirate Perch Family, APHREDODERIDAE

Pirate perch, *Aphredoderus sayanus* (Gilliams)

Killifish Family, CYPRINODONTIDAE

Golden topminnow, *Fundulus chrysotus* (Günther)
Starhead topminnow, *Fundulus nottii* (Agassiz)
Blackstripe topminnow, *Fundulus notatus* (Rafinesque)
Blackspotted topminnow, *Fundulus olivaceus* (Storer)

Livebearer Family, POECILIIDAE

Western mosquitofish, *Gambusia affinis* (Baird and Girard)
Least killifish, *Heterandria formosa* Agassiz
Sailfin molly, *Poecilia latipinna* (Lesueur)

Silverside Family, ATHERINIDAE

Brook silverside, *Labidesthes sicculus* (Cope)
Inland silverside, *Menidia beryllina* (Cope)

Sunfish Family, CENTRARCHIDAE

Flier, *Centrarchus macropterus* (Lacépède)
Banded pygmy sunfish, *Elassoma zonatum* Jordan
Green sunfish, *Lepomis cyanellus* Rafinesque
Warmouth, *Lepomis gulosus* (Cuvier)
Orangespotted sunfish, *Lepomis humilis* (Girard)
Bluegill, *Lepomis macrochirus* (Rafinesque)
Dollar sunfish, *Lepomis marginatus* (Holbrook)
Longear sunfish, *Lepomis megalotis* (Rafinesque)
Redear sunfish, *Lepomis microlophus* (Günther)
Spotted sunfish, *Lepomis punctatus* (Valenciennes)
Bantam sunfish, *Lepomis symmetricus* Forbes
Florida largemouth bass, *Micropterus floridanus* Kassler et al.
Northern largemouth bass, *Micropterus salmoides salmoides* (Lacépède)
White crappie, *Pomoxis annularis* Rafinesque
Black crappie, *Pomoxis nigromaculatus* (Lesueur)

Perch Family, PERCIDAE

Scaly sand darter, *Ammocrypta vivax* Hay
Bluntnose darter, *Etheostoma chlorosomum* (Hay)
Creole darter, *Etheostoma collettei* Birdsong and Knapp
Swamp darter, *Etheostoma fusiforme* (Girard)
Slough darter, *Etheostoma gracile* (Girard)
Cypress darter, *Etheostoma proeliare* (Hay)
Speckled darter, *Etheostoma stigmaeum* (Jordan)
Redfin darter, *Etheostoma whipplei* (Girard)
Logperch, *Percina caprodes* (Rafinesque)
Blackside darter, *Percina maculata* (Girard)
Dusky darter, *Percina sciera* (Swain)
Saddleback darter, *Percina vigil* (Jordan and Gilbert)

Drum Family, SCIAENIDAE

Freshwater drum, *Aplodinotus grunniens* Rafinesque

Nomenclature and phylogenetic order follows Nelson, *et al*. 2004. Common and Scientific Names of Fishes from the United States, Canada, and Mexico, 6th Edition. American Fisheries Society Special Publication 29. 386 pp. Exceptions are noted.

Genetics

Largemouth bass are collected during fall electrofishing samples and tested for the Florida genome. Five bass per inch group are taken from the sample and brought back to the district office. Total length and weight is recorded for each specimen. Otoliths and livers are removed for age/growth and genetic analysis. Liver tissues are delivered to the LSU genetics laboratory for electrophoresis analyses. Samples have been tested for the Florida genome from 1990 – 2012 (Table 7).

Table 1. Largemouth bass genetic results for Chicot Lake, LA, 1988 – 2012.

YEAR	FLMB STOCKED	GENETIC SAMPLING RESULTS				
		N	NLMB	FLMB	F_X	TOTAL FLORIDA INFLUENCE
1988	342,668					
1989	150,000					
1990	127,564	37	82%	02%	16%	18%
1991	132,619					
1992	107,221					
1993	80,595					
1994	85,250	52	56%	19%	25%	44%
1995	153,475	51	56%	15%	29%	44%
1996	18,792					
1997	19,178	152	54%	15%	31%	46%
1998	55,800	35	83%	0%	17%	17%
1999	152,872	33	58%	6%	36%	42%
2000	87,891					
2001	89,568	29	52%	3%	45%	48%
2002	73,322					
2003	83,989					
2004	80,748	33	76%	16%	8%	24%
2005	84,310					
2006	82,425					
2007	84,192	57	44%	2%	54%	56%
2009	86,241	51	56%	38%	6%	42%
2010	75,529	141	62%	11%	27%	39%
2011	72,331	156	70%	8%	22%	30%
2012	66,940	128	70%	6%	24%	30%

Threatened/endangered/exotic species
No T&E or endangered species documented in Chicot Lake to date.

Creel
Creel surveys were conducted in 1989-1992, 1996, 1998, 2002, 2006 and 2010. The angler survey method used is a dockside (access point) survey of completed fishing trips.

HYDROLOGICAL CHANGES

Chicot Lake was impounded in the late winter of 1942 by closing the dam alongside the spillway across Chicot Bayou, south of St. Landry, Louisiana. A drawdown structure and system of drainage channels were constructed in 1963. In 1985, it was determined that the original floodgate structure needed to be replaced. The lake was drained and the original spillway and floodgate was demolished. Construction of the new spillway and floodgate began in 1986. The spillway construction project was completed and Chicot Lake was allowed to refill in December 1987.

Water use

Hunting
No

Skiing
No

Scuba Diving
No

Swimming
No

Irrigation
No

APPENDIX I -

(return to Access)

Chicot Lake Map of Fishing Piers and Boat Ramps/Landings

APPENDIX II

(return to typemap)

Chicot Vegetation Type Map

September 21, 2011

Chicot lake water level was 18 inches below pool and the bridge on the spillway road was being re-surfaced. Chicot Lake was de-watered 7 feet from pool the first Tuesday after Labor Day, 2010. The lake has remained below pool since that day due to a serious drought in that area during 2011. No fish kills were observed or reported during the drawdown procedure. The lake was de-watered in order to facilitate the repair of pilings of the Walker Branch Bridge which crosses one of the lake's numerous coves. Chicot refilled from rainfall to a safe level for fishing and power boat use by the end of March 2011. Much of the lake bottom was exposed from late September 2010 until mid-February 2011 with only the main deeper channel remaining wet with 8 to 10 feet of water. The channel runs from just south of the south end boat launch to the lake spillway and continues to the north-end boat launch. This channel provided suitable fish habitat during the bridge repair.

Vegetation observed in the lake was mostly water hyacinth (Eichhornia crassipes) with the greatest amount existing from the middle to the northern end of the lake. Severe amounts of water hyacinth were seen in the area surrounding the north boat launch as well as adjacent to the main channel near the mid-section of the lake. There was a light to moderate fringe of water hyacinth along the shore of the lake starting in the middle section extending into turtle island and conservation cove. A light fringe of water hyacinth could be found in Walker's branch and a heavy fringe was seen along Pine Island. This heavy fringe of water hyacinth in the Pine island area was first noticed during April of 2011 while tagging bass for the Cabela's fishing tournament. At this time, only small patches of water hyacinth were observed elsewhere in the lake.

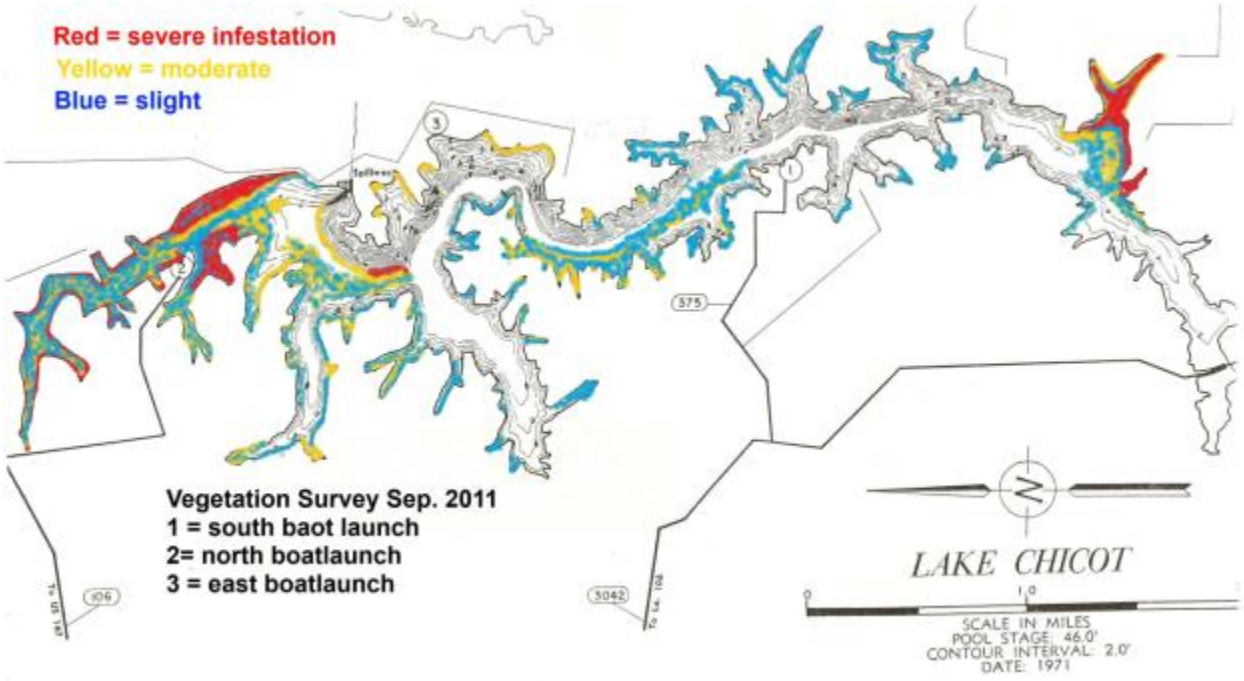
Light to moderate amounts of water hyacinth were observed in the southern end of the lake on September 21, 2011. Heavy amounts of water primrose (Ludwigia spp.) were observed on the southern end of the lake. A light fringe of water hyacinth could be seen in the back of coves located on the southern end of the lake.

A heavy infestation of American lotus (Nelumbo lutea) and white water lily (Nymphaea odorata) was observed on the shallow flats adjacent to the north boat launch. There was a heavy amount of filamentous algae (Spirogyra) in this area as well. Little to no hydrilla (Hydrilla verticillata) was found in this area with no hydrilla being found in conservation cove or along the spoil bank canal banks. This area had received a treatment of Sonar fluridone herbicide during the spring of

2010. Submerged vegetation was found in the end of the conservation cove, southern naiad (Najas guadalupensis) in light amounts. A very light amount of duckweed (Lemna spp.) and common salvinia (Salvinia minima) was seen in the lake. NO GIANT SALVINIA OBSERVED.

Below are several of the measured lake water parameters of Chicot. Data was collected on the 23rd of September, 2011.

Date	Temp	SpCond	Salinity	Depth	pH	pHmV	Turbidity+	Chlorophyll	d.o. percent	d.o. mg/l	Station
9/23/11	25.69	0.068	0.03	4.816	8.09	-72.2	2.0	11.9	44.50	3.63	North flat
9/23/11	25.73	0.067	0.03	0.484	7.64	-47.1	5.1	12.9	43.20	3.52	
9/23/11	24.38	0.103	0.05	3.762	7.10	-17.1	1.4	11.5	8.30	0.69	South end
9/23/11	24.94	0.098	0.04	0.202	6.98	-10.4	0.4	16.5	37.00	3.06	
9/23/11	26.40	0.075	0.03	9.632	6.99	-10.6	65.3	27.2	6.50	0.53	South boat launch
9/23/11	26.75	0.071	0.03	0.273	6.84	-2.5	2.6	20.1	60.00	4.80	



Chicot Lake Vegetation Typemap

September 6, 2012

Water hyacinth (*Eichhornia crassipes*) was the predominant species of floating vegetation. Other floating plants observed were duckweed (*Lemna spp*.) and common salvinia (*Salvinia minima*). Floating vegetation was not the main problem, although small pockets and fringes were scattered throughout the lake and within some coves. These small infestations are treated regularly throughout the growing season by District 6 spray crews.

A severe infestation of submerged and emergent aquatic vegetation was observed in the northern part of the lake adjacent to the boat launch (~130 acres). This area received a Sonar treatment in the spring of 2012. The predominant species of submerged aquatic vegetation (SAV) were coontail (*Ceratophyllum demersum*), fanwort (*Cabomba caroliniana*), southern naiad (*Najas* guadalupensis), and hydrilla (*Hydrilla verticillata*). The predominant emergent species were American lotus (*Nelumbo lutea*), alligatorweed (*Alternanthera philoxeroides*), and white water lily (*Nymphaea odorata*).

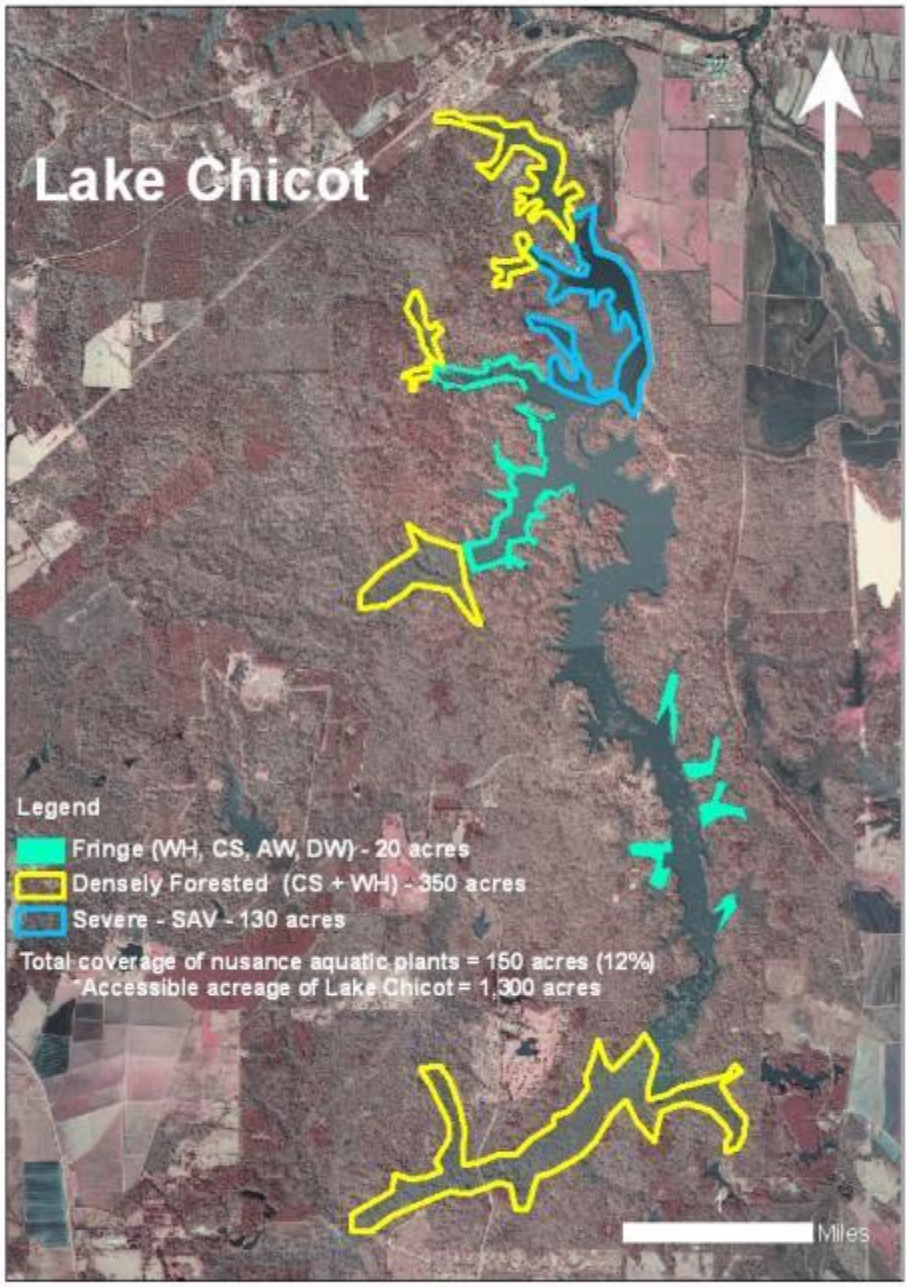
*Hydrilla was observed in trace amounts. The bulk of SAV was composed of native species.

Walker Branch and Turtle Island were relatively clear of nuisance aquatic vegetation.

Several coves as well as the very north and south of the lake had moderate-to-severe infestations of a variety of nuisance aquatic vegetation. However, these areas are densely forested, shallow, and considered inaccessible.

An estimated total of 150 acres of nuisance aquatic vegetation was observed. The estimated total of accessible acreage is 1,300 acres. An estimated 12% of Chicot Lake is infested with nuisance aquatic vegetation (mostly SAV).

*NO GIANT SALVINIA WAS OBSERVED.


Lake Chicot
Legend
Fringe (WH, CS, AW, DW) - 20 acres
Densely Forested (CS + WH) - 350 acres
Severe - SAV - 130 acres
Total coverage of nusance aquatic plants = 150 acres (12%)
*Accessible acreage of Lake Chicot = 1,300 acres
Miles